

CLAIMS

What is claimed is:

- 1) A fuel additive system, for comprehensive-single-addition improvement of low-quality transportation fuels, comprising:
 - a) at least one amount of at least one additive component sufficient to effectively enhance biocidal action;
 - b) at least one amount of at least one additive component sufficient to effectively enhance combustion boosting action;
 - c) at least one amount of at least one additive component sufficient to effectively enhance corrosion inhibiting action;
 - d) at least one amount of at least one additive component sufficient to effectively enhance water managing action;
 - e) at least one amount of at least one additive component sufficient to effectively enhance detergent action;
 - f) at least one amount of at least one additive component sufficient to effectively enhance solvent action;
 - g) at least one amount of at least one additive component sufficient to effectively enhance fuel stabilizing action; and
 - h) at least one amount of at least one additive component sufficient to effectively enhance fuel lubricating action;
 - i) wherein at least one user-friendly, effective, additive may be provided for adding to transportation fuels.
- 2) The fuel additive system according to Claim 1 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action.
- 3) The fuel additive system according to Claim 1 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action.
- 4) The fuel additive system according to Claim 1 further comprising:
 - a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action; and
 - b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action.

- 5) The fuel additive system according to Claim 1 further comprising the low-quality transportation fuels.
- 6) The fuel additive system according to Claim 5 wherein said at least one amounts of said at least one additive components totally comprise a volume ratio with respect to transportation fuels of about 1:1000.
- 7) The fuel additive system according to Claim 1, for comprehensive-single-addition improvement of low-quality motor fuels, wherein:
 - a) said at least one amount of said at least one additive component sufficient to effectively enhance biocidal action comprises from about 0.2 to about 7 volume percent;
 - b) said at least one amount of said at least one additive component sufficient to effectively enhance combustion boosting action comprises from about 1 to about 5 volume percent;
 - c) said at least one amount of said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises from about 0.2 to about 5 volume percent;
 - d) said at least one amount of said at least one additive component sufficient to effectively enhance water managing action comprises from about 2 to about 8 volume percent;
 - e) said at least one amount of said at least one additive component sufficient to effectively enhance detergent action comprises from about 20 to about 45 volume percent;
 - f) said at least one amount of said at least one additive component sufficient to effectively enhance solvent action comprises from about 46 to about 80 volume percent;
 - g) said at least one amount of said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises from about 0.2 to about 5 volume percent; and
 - h) said at least one amount of said at least one additive component sufficient to effectively enhance fuel lubricating action comprises from about 0.5 to about 5 volume percent;
 - i) wherein at least one user-friendly, effective, additive may be provided for adding to motor fuels.

- 8) The fuel additive system according to Claim 7 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0002 to about 9 volume percent.
- 9) The fuel additive system according to Claim 7 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 5 to about 10 volume percent.
- 10) The fuel additive system according to Claim 7 further comprising:
 - a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0002 to about 9 volume percent; and
 - b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 5 to about 10 volume percent.
- 11) The fuel additive system according to Claim 7 wherein:
 - a) said at least one amount of said at least one additive component sufficient to effectively enhance biocidal action comprises from about 0.6 to about 5 volume percent;
 - b) said at least one amount of said at least one additive component sufficient to effectively enhance combustion boosting action comprises from about 2 to about 4 volume percent;
 - c) said at least one amount of said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises from about 1 to about 2.5 volume percent;
 - d) said at least one amount of said at least one additive component sufficient to effectively enhance water managing action comprises from about 2 to about 6 volume percent;
 - e) said at least one amount of said at least one additive component sufficient to effectively enhance detergent action comprises from about 26 to about 35 volume percent;
 - f) said at least one amount of said at least one additive component sufficient to effectively enhance solvent action comprises from about 52 to about 59 volume percent;

- g) said at least one amount of said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises from about 1 to about 2.5 volume percent; and
 - h) said at least one amount of said at least one additive component sufficient to effectively enhance fuel lubricating action comprises from about 1.5 to about 2.5 volume percent.
- 12) The fuel additive system according to Claim 11 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0004 to about 6 volume percent.
- 13) The fuel additive system according to Claim 11 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 6 to about 8 volume percent.
- 14) The fuel additive system according to Claim 11 further comprising:
 - a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0004 to about 6 volume percent; and
 - b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 6 to about 8 volume percent.
- 15) The fuel additive system according to Claim 11 wherein:
 - a) said at least one amount of said at least one additive component sufficient to effectively enhance biocidal action comprises about 4 volume percent 1,2,4-trimethylbenzene;
 - b) said at least one amount of said at least one additive component sufficient to effectively enhance combustion boosting action comprises about 3 volume percent cumene;
 - c) said at least one amount of said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises about 2 volume percent DCI 6ATM;
 - d) said at least one amount of said at least one additive component sufficient to effectively enhance water managing action comprises about 3 volume percent 2-butoxyethanol;

- e) said at least one amount of said at least one additive component sufficient to effectively enhance detergent action comprises about 20 volume percent DMA 558TM and about 6 volume percent 2,4-pentanedione;
- f) said at least one amount of said at least one additive component sufficient to effectively enhance solvent action comprises about 50 volume percent xylene and about 2 volume percent n-propylbenzene;
- g) said at least one amount of said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises about 2 volume percent AO 22TM; and
- h) said at least one amount of said at least one additive component sufficient to effectively enhance fuel lubricating action comprises about 2 volume percent DCI 6ATM.

16) The fuel additive system according to Claim 15 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising about 2 volume percent ferrocene.

17) The fuel additive system according to Claim 15 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising about 6 volume percent methanol.

18) The fuel additive system according to Claim 15 further comprising:

- a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising about 2 volume percent ferrocene; and
- b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 6 volume percent methanol.

19) The fuel additive system according to Claim 1, for comprehensive-single-addition improvement of low-quality diesel fuels, comprising:

- a) at least one amount of at least one additive component sufficient to effectively enhance biocidal action;
- b) at least one amount of at least one additive component sufficient to effectively enhance combustion boosting action;
- c) at least one amount of at least one additive component sufficient to effectively enhance corrosion inhibiting action;

- d) at least one amount of at least one additive component sufficient to effectively enhance water managing action;
- e) at least one amount of at least one additive component sufficient to effectively enhance detergent action;
- f) at least one amount of at least one additive component sufficient to effectively enhance solvent action;
- g) at least one amount of at least one additive component sufficient to effectively enhance fuel stabilizing action; and
- h) at least one amount of at least one additive component sufficient to effectively enhance fuel lubricating action;
- i) wherein at least one user-friendly, effective, additive may be provided for adding to diesel fuels.

20) The fuel additive system according to Claim 19 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action.

21) The fuel additive system according to Claim 19 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action.

22) The fuel additive system according to Claim 19 further comprising:

- a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action; and
- b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action.

23) The fuel additive system according to Claim 19 wherein:

- a) said at least one amount of said at least one additive component sufficient to effectively enhance biocidal action comprises from about 0.1 to about 2 volume percent;
- b) said at least one amount of said at least one additive component sufficient to effectively enhance combustion boosting action comprises from about 31 to about 65 volume percent;
- c) said at least one amount of said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises from about 0.25 to about 1 volume percent;

- d) said at least one amount of said at least one additive component sufficient to effectively enhance water managing action comprises from about 5 to about 15 volume percent;
- e) said at least one amount of said at least one additive component sufficient to effectively enhance detergent action comprises from about 10 to about 30 volume percent;
- f) said at least one amount of said at least one additive component sufficient to effectively enhance solvent action comprises from about 22 to about 60 volume percent;
- g) said at least one amount of said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises from about 5 to about 10 volume percent; and
- h) wherein said at least one amount of said at least one additive component sufficient to effectively enhance fuel lubricating action comprises from about 1.2 to about 2.5 volume percent.

24) The fuel additive system according to Claim 23 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0002 to about 9 volume percent.

25) The fuel additive system according to Claim 23 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 2 to about 45 volume percent.

26) The fuel additive system according to Claim 23 further comprising:

- a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0002 to about 9 volume percent; and
- b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 2 to about 45 volume percent.

27) The fuel additive system according to Claim 23 wherein:

- a) said at least one amount of said at least one additive component sufficient to effectively enhance biocidal action comprises from about 0.5 to about 1 volume percent;

- b) said at least one amount of said at least one additive component sufficient to effectively enhance combustion boosting action comprises from about 31 to about 43 volume percent;
- c) said at least one amount of said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises from about 0.5 to about 0.75 volume percent;
- d) said at least one amount of said at least one additive component sufficient to effectively enhance water managing action comprises from about 5 to about 10 volume percent;
- e) said at least one amount of said at least one additive component sufficient to effectively enhance detergent action comprises from about 10 to about 20 volume percent;
- f) said at least one amount of said at least one additive component sufficient to effectively enhance solvent action comprises from about 22 to about 45 volume percent;
- g) said at least one amount of said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises from about 5 to about 7 volume percent; and
- h) wherein said at least one amount of said at least one additive component sufficient to effectively enhance fuel lubricating action comprises from about 1.5 to about 2 volume percent.

28) The fuel additive system according to Claim 27 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0004 to about 6 volume percent.

29) The fuel additive system according to Claim 27 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 5 to about 31 volume percent.

30) The fuel additive system according to Claim 27 further comprising:

- a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising from about 0.0004 to about 6 volume percent; and
- b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising from about 5 to about 31 volume percent.

- 31) The fuel additive system according to Claim 27 wherein:
 - a) said at least one amount of said at least one additive component sufficient to effectively enhance biocidal action comprises about 1 volume percent T9312TM;
 - b) said at least one amount of said at least one additive component sufficient to effectively enhance combustion boosting action comprises about 30 volume percent 2-ethylhexyl nitrate and also comprises about 2 volume percent 2-ethylhexyl alcohol;
 - c) said at least one amount of said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises about 0.5 volume percent DCI 6ATM;
 - d) said at least one amount of said at least one additive component sufficient to effectively enhance water managing action comprises about 5 volume percent DMA 451TM;
 - e) said at least one amount of said at least one additive component sufficient to effectively enhance detergent action comprises about 5 volume percent DMA 451TM;
 - f) said at least one amount of said at least one additive component sufficient to effectively enhance solvent action comprises about 20 volume percent AROL 50TM and also comprises about 2.5 volume percent heavy aromatic naptha;
 - g) said at least one amount of said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises about 5 volume percent DMA 558TM; and
 - h) wherein said at least one amount of said at least one additive component sufficient to effectively enhance fuel lubricating action comprises about 2 volume percent OLI 5015TM.
- 32) The fuel additive system according to Claim 31 further comprising at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising about 2 volume percent ferrocene.
- 33) The fuel additive system according to Claim 31 further comprising at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising about 20 volume percent vinyl acetate polymers.
- 34) The fuel additive system according to Claim 31 further comprising:

- a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action comprising about 2 volume percent ferrocene; and
- b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action comprising about 20 volume percent vinyl acetate polymers.

35) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance combustion boosting action comprises at least one additive component selected from the group consisting essentially of:

- a) methyl tert-butyl ether
- b) ethyl tert-butyl ether
- c) tert-amyl methyl ether
- d) diisopropyl ether
- e) tert-amyl alcohol
- f) tert-butyl alcohol
- g) methanol
- h) ethanol
- i) isopropanol
- j) n-propylbenzene
- k) toluene
- l) xylene
- m) benzene
- n) nitromethane
- o) nitroethane
- p) propylene oxide
- q) naptha
- r) alcohols
- s) ethers
- t) cumene.

36) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises at least one additive component selected from the group consisting essentially of:

- a) DCI series products
- b) DCI 6ATM
- c) DCI 4ATM
- d) DCI 11TM
- e) DCI 28TM
- f) DCI 30TM
- g) HITEC 580TM
- h) BIOBOR JFTM
- i) ONDEO-NALCO 5403TM.

37) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance water managing action comprises at least one additive component selected from the group consisting essentially of:

- a) 2-butoxyethanol
- b) methanol
- c) ethanol
- d) isopropyl alcohol
- e) alcohols
- f) ethers
- g) water scavengers
- h) DMA 451TM.

38) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance detergent action comprises at least one additive component selected from the group consisting essentially of:

- a) DMA 558TM
- b) DMA series products
- c) amines
- d) polyisobutyleneamine
- e) polyetheramine
- f) polyalkyl amines
- g) polyether amines
- h) polyalkyl succinimides
- i) polyalkylaminophenols

- j) sulfonate
- k) phosphonate
- l) thiophosphonate
- m) phenate
- n) salicylate
- o) 2,4-pantanediol
- p) 2,3-pantanediol.

39) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance solvent action comprises at least one additive component selected from the group consisting essentially of:

- a) xylene
- b) toluene
- c) benzene
- d) naptha
- e) cumene
- f) n-propylbenzene.

40) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises at least one additive component selected from the group consisting essentially of:

- a) AO 22™
- b) AO series products
- c) alkylated phenols
- d) diamines
- e) surfactants
- f) dispersants
- g) 2,4-pantanediol
- h) 2,3-pantanediol
- i) amines.

41) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance biocide action comprises at least one additive component selected from the group consisting essentially of:

- a) 1,2,4-trimethylbenzene
- b) thiazoles
- c) thiocyanates
- d) isothiazolins
- e) cyanobutane
- f) dithiocarbamate
- g) thione
- h) bromo-compounds
- i) surfactants
- j) water-scavengers
- k) ONDEO-NALCO 303MC™
- l) BIOBOR JFTM.

42) The fuel additive system according to Claim 7, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance fuel lubricating action comprises at least one additive component selected from the group consisting essentially of:

- a) DCI 6A™
- b) DCI™ series products
- c) AO™ series products
- d) oils
- e) polyalphaolefins
- f) sulfur
- g) ONDEO-NALCO 5403
- h) lubricants.

43) The fuel additive system according to Claim 8, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance combustion modifying action comprises at least one additive component selected from the group consisting essentially of:

- a) ferrocene
- b) platinum
- c) cerium
- d) manganese
- e) methylcyclopentadienyl manganese tricarbonyl
- f) HITEC 3023™.

44) The fuel additive system according to Claim 9, for comprehensive-single-addition improvement of low-quality motor fuels, wherein said at least one additive component sufficient to effectively enhance low temperature flowing action comprises at least one additive component selected from the group consisting essentially of:

- a) methanol
- b) n-propanol
- c) isopropanol
- d) polyalkyl methacrylate
- e) polystyrene methacrylate
- f) polymethacrylates
- g) polymers
- h) dispersants
- i) wax modifiers
- j) alcohols
- k) 2-butoxyethanol.

45) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance combustion boosting action comprises at least one additive component selected from the group consisting essentially of:

- a) 2-ethylhexyl nitrate
- b) 2-ethylhexyl alcohol
- c) cumene
- d) n-propylbenzene
- e) toluene
- f) xylene
- g) benzene
- h) nitromethane
- i) nitroethane
- j) propylene oxide
- k) ethanol
- l) octyl nitrate
- m) naptha
- n) methyl tert-butyl ether
- o) ethyl tert-butyl ether

- p) tert-amyl methyl ether
- q) diisopropyl ether
- r) tert-amyl alcohol
- s) tert-butyl alcohol
- t) methanol
- u) isopropyl alcohol
- v) tert-butyl alcohol
- w) tert-amyl alcohol
- x) alcohols
- y) ethers.

46) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance corrosion inhibiting action comprises at least one additive component selected from the group consisting essentially of:

- a) DCI 4ATM
- b) DCI 6ATM
- c) DCI 11TM
- d) DCI 28TM
- e) DCI 30TM
- f) HI TEC 580TM
- g) BIOBOR JFTM
- h) ONDEO-NALCO 5403TM
- i) azoles
- j) amines
- k) nitrites
- l) phosphates
- m) molybdates
- n) phosphonates
- o) silicates.

47) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance water managing action comprises at least one additive component selected from the group consisting essentially of:

- a) DMA 451TM

- b) DDA-4500™
- c) HITEC 6471™
- d) HITEC 6423™
- e) ALKEN EVEN FLO 910™
- f) Alcohols
- g) 2-butoxyethanol
- h) water scavengers.

48) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance detergent action comprises at least one additive component selected from the group consisting essentially of:

- a) DMA 451™
- b) DMA series products
- c) DMA 558™
- d) DMA 559™
- e) DMA 560™
- f) DMA 561™
- g) DMA 562™
- h) DMA 563™
- i) DMA 564™
- j) amines
- k) polyisobutyleneamine
- l) polyetheramine
- m) polyalkyl amines
- n) polyether amines
- o) polyalkyl succinimides
- p) polyalkylaminophenols
- q) sulfonates
- r) phosphonates
- s) thiophosphonates
- t) phenates
- u) salicylates.
- v) 2,4-pentanedione
- w) 2,3-pentanedione.

49) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance solvent action comprises at least one additive component selected from the group consisting essentially of:

- a) AROL 50TM
- b) HISOL 100
- c) benzene
- d) xylene
- e) toluene
- f) cumene
- g) naptha
- h) heavy aromatic naptha
- i) n-propylbenzene.

50) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance fuel stabilizing action comprises at least one additive component selected from the group consisting essentially of:

- a) DMA 558TM
- b) DMATM series products
- c) 2,3-pentanedione
- d) 2,4-pentanedione
- e) amines
- f) dispersants
- g) surfactants.

51) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance biocide action comprises at least one additive component selected from the group consisting essentially of:

- a) T9312TM
- b) T9360TM
- c) 1,2,4-trimethylbenzene
- d) KATHON 886TM
- e) BIOBOR JFTM
- f) ONDEO-NALCO 303MCTTM

- g) thiazoles
- h) thiocyanates
- i) isothiazolins
- j) cyanobutane
- k) dithiocarbamate
- l) thione
- m) bromo-compounds
- n) surfactants
- o) water-scavengers.

52) The fuel additive system according to Claim 19, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance fuel lubricating action comprises at least one additive component selected from the group consisting essentially of:

- a) OLI 5015™
- b) All AO™ series products
- c) All DCI™ series products
- d) All OLI-5000™ series products
- e) All OLI-9000™ series products
- f) ONDEO-NALCO 5403™
- g) HITEC 580™
- h) oils
- i) polyalphaolefins
- j) sulfur.

53) The fuel additive system according to Claim 20, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance combustion modifying action comprises at least one additive component selected from the group consisting essentially of:

- a) ferrocene
- b) platinum
- c) cerium
- d) manganese
- e) methylcyclopentadienyl manganese tricarbonyl
- f) HITEC 3023™
- g) ALKEN EVEN FLO 910™

h) nitromethane.

54) The fuel additive system according to Claim 21, for comprehensive-single-addition improvement of low-quality diesel fuels, wherein said at least one additive component sufficient to effectively enhance low temperature flowing action comprises at least one additive component selected from the group consisting essentially of:

- a) alcohols
- b) methanol
- c) n-propanol
- d) 2-butoxyethanol
- e) isopropanol
- f) polyalkyl methacrylate
- g) polystyrene methacrylate
- h) polymethacrylates
- i) polymers
- j) dispersants
- k) wax modifiers
- l) vinyl acetate polymers.

55) A method of making a fuel additive system, for comprehensive-single-addition improvement of low-quality transportation fuels, comprising the step of mixing the following ingredients:

- a) at least one amount of at least one additive component sufficient to effectively enhance biocidal action;
- b) at least one amount of at least one additive component sufficient to effectively enhance combustion boosting action;
- c) at least one amount of at least one additive component sufficient to effectively enhance corrosion inhibiting action;
- d) at least one amount of at least one additive component sufficient to effectively enhance water managing action;
- e) at least one amount of at least one additive component sufficient to effectively enhance detergent action;
- f) at least one amount of at least one additive component sufficient to effectively enhance solvent action;
- g) at least one amount of at least one additive component sufficient to effectively enhance fuel stabilizing action; and

- h) at least one amount of at least one additive component sufficient to effectively enhance fuel lubricating action;
 - i) wherein at least one user-friendly, effective, additive may be provided for adding to transportation fuels.

56) The method of making a fuel additive system according to Claim 55 wherein said step further comprises mixing in at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action.

57) The method of making a fuel additive system according to Claim 55 wherein said step further comprises mixing in at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action.

58) The fuel additive system according to Claim 55 wherein said step further comprises mixing in:

- a) at least one amount of at least one additive component sufficient to effectively enhance combustion modifying action; and
- b) at least one amount of at least one additive component sufficient to effectively enhance low temperature flowing action.

59) The fuel additive system according to Claim 55 further comprising the step of mixing in low-quality transportation fuels.

60) The fuel additive system according to Claim 59 wherein said at least one amounts of said at least one additive components totally comprise a volume ratio with respect to said low-quality transportation fuels of about 1:1000.

61) A method of providing comprehensive fuel additives to at least one political entity in order to ameliorate the deleterious effects of low quality transportation fuels, in relation to at least one transportation fuel being used within such at least one political entity, comprising the steps of:

- a) presenting to targeted such at least one political entity at least one demonstration testing plan for such at least one comprehensive fuel additive to demonstrate effectiveness;
- b) based upon results of any such demonstration testing, modifying at least one formula of such at least one comprehensive fuel additive for improved effectiveness; and
- c) transporting to such political entity in quantity such at least one upgraded formula for use with such transportation fuels.

62) The method according to Claim 61 further comprising the step of providing instructions for use of such at least one upgraded formula with each unit of such at least one transportation fuel.

63) The method according to Claim 61 further comprising the step of recursively improving such at least one formula of such at least one comprehensive fuel additive to provide at least one upgraded formula for at least one region for such at least one political entity.

64) The method according to Claim 61 wherein such comprehensive fuel additives comprise:

- a) at least one combustion booster;
- b) at least one corrosion inhibitor;
- c) at least one water manager,
- d) at least one detergent;
- e) at least one biocide;
- f) at least one stabilizer; and
- g) at least one lubricant.

65) The method according to Claim 64 wherein such comprehensive fuel additives further comprise at least one low temperature additive.

66) The method according to Claim 64 wherein such comprehensive fuel additives further comprise at least one combustion modifier.

67) A method of developing comprehensive fuel additives for at least one political entity in order to ameliorate the deleterious effects of low-quality transportation fuels comprising the steps of:

- a) identifying at least one comprehensive set of fuel additive ingredients useful together to ameliorate the deleterious effects of such low-quality transportation fuels;
- b) identifying, by theory and testing of such low-quality transportation fuels, at least one formula comprising at least one component additive quantity of each such at least one comprehensive set of fuel additive ingredients;
- c) identifying, for a particular at least one political entity, at least one potentially useful initial such at least one formula for demonstration testing to demonstrate effectiveness; and
- d) if improvement to such initial such at least one formula is desired, modifying such initial such at least one formula to provide at least one upgraded formula.

- 68) The method according to Claim 67 wherein such at least one comprehensive set of fuel additive ingredients comprise:
 - a) at least one combustion booster;
 - b) at least one corrosion inhibitor;
 - c) at least one water manager,
 - d) at least one detergent;
 - e) at least one biocide;
 - f) at least one stabilizer; and
 - g) at least one lubricant.
- 69) The method according to Claim 68 wherein such comprehensive fuel additives further comprise at least one low temperature additive.
- 70) The method according to Claim 68 wherein such comprehensive fuel additives further comprise at least one combustion modifier.